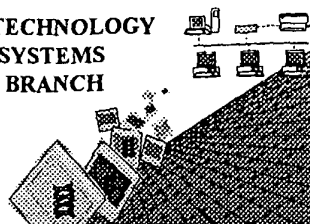


✓

#14

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



**RAW SEQUENCE LISTING**  
**ERROR REPORT**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/720,383B  
Source: 1600 RUSH  
Date Processed by STIC: 11/18/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: [patin21help@uspto.gov](mailto:patin21help@uspto.gov) or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: [patin3help@uspto.gov](mailto:patin3help@uspto.gov) or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER**  
**VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND  
TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/ebc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:  
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7<sup>th</sup> Floor, Examiner Name,  
Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202  
Or  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two,  
2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office,  
Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202



1600

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

3 <110> APPLICANT: Stephen M. Allen  
 4 Gary M. Fader  
 5 Saverio Carl Falco  
 6 Anthony J. Kinney  
 7 Jonathan E. Lightner  
 8 Guo-Hua Miao  
 9 J. Antoni Rafalski  
 10 Catherine J. Thorpe  
 12 <120> TITLE OF INVENTION: Plant Cellulose Synthases  
 14 <130> FILE REFERENCE: BB-1170  
 16 <140> CURRENT APPLICATION NUMBER: 09/720,383B  
 17 <141> CURRENT FILING DATE: 2000-12-21  
 19 <150> PRIOR APPLICATION NUMBER: 60/092,844  
 20 <151> PRIOR FILING DATE: 1998-07-14  
 22 <160> NUMBER OF SEQ ID NOS: 29  
 24 <170> SOFTWARE: Microsoft Office 97

Does Not Comply  
 Corrected Diskette Needed

pp 1-20

## ERRORED SEQUENCES

26 <210> SEQ ID NO: 1  
 27 <211> LENGTH: 1221  
 28 <212> TYPE: DNA  
 29 <213> ORGANISM: Hordeum vulgare  
 31 <400> SEQUENCE: 1  
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 33 60  
 E--> 34 catgccacca cgaccttgtt tcaaggggtc tgcgccaatc aatctctctg accgtctcaa  
 35 120  
 E--> 36 tcaagttctc cgggtgggtc ttgggtcagt tgaaattctg tttagcagac attgtcctat  
 37 180  
 E--> 38 ctggtacaat tacggtgggc ggttgaaact tctggagagg atggcttaca tcaacacat  
 39 240  
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 41 300  
 E--> 42 cctcaccaac aaatttatca ttccogagat cagtaactat gctgggatgt tctttattct  
 43 360  
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 45 420  
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 47 480  
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 49 540

global  
 format  
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 60  
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 see  
 Item 1 on  
 Error Summary  
 sheet

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

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Output Set: N:\CRF4\11182002\I720383B.raw

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 51 600  
 E--> 52 tctcctcatt cctccgacca cgcctcttgt gattaacctg gtgggcatgg tggcaggcat  
 53 660  
 E--> 54 atcatatgcc atcaacagcg gttaccagtc ttgggggtcca ctcttcggaa agctcttctt  
 55 720  
 E--> 56 ctcaatctgg gtgatcctcc atctctaccc cttcctcaag ggtctcatgg ggaagcagaa  
 57 780  
 E--> 58 cgcacgcca accatcgta ttgtttggtc catcctccta gcctccatct tctccctcct  
 59 840  
 E--> 60 gtgggtgaag atcgaccctt tcatatccga taccagaaa gccgtcgcca tggggcagtg  
 61 900  
 E--> 62 tggcgtaac tgctgatcgg cgccgaagag tatctgcccc cctcgtgtaa ataccggagg  
 63 960  
 E--> 64 ggggttgatg ggattttgtt gttgtagatg aagacggagt tttatgtaag ttattattgc  
 65 1020  
 E--> 66 cccttcgtgc tgagaagcac aaaccgtgaa gcctacgaaa cctgcagcgt acattgtgat  
 67 1080  
 E--> 68 ttttttctcc ttttcttttc atctgtgata cctgttggtt cttcttagag tatattatgt  
 69 1140  
 E--> 70 cagaacgtat ctatagttct atacacacta tgacaccaac tatttatata aggcagctgt  
 71 1200  
 E--> 72 tgcataact cttctgcaaa a  
 73 1221  
 138 <210> SEQ ID NO: 3  
 139 <211> LENGTH: 3776  
 140 <212> TYPE: DNA  
 141 <213> ORGANISM: Zea mays  
 143 <400> SEQUENCE: 3  
 E--> 144 gcgcgccgcg caggcgcaac gcaacaaagg gaaacccag ccggaggagc aaaagctagc  
 145 60  
 E--> 146 aagcgtgtcc ctccccctcc ctactcccg tttcattcca tccccccca gacgcgcta  
 147 120  
 E--> 148 ccgccgccgc cgcacgcacg cttgccccgg gatctggaga tctggtagcg ccagggggat  
 149 180  
 E--> 150 ggaggccagc gccgggctgg tcgccggctc gcacaaccgg aacgagctcg tcgtcatccg  
 151 240  
 E--> 152 ccgcgatggc gagccagggc cgaagcccat ggaccagcgg aacggccagg tgtgccagat  
 153 300  
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 155 360  
 E--> 156 cgccttcccc atctgccggg actgctacga gtacgagcgc cgcgagggca cgcagaactg  
 157 420  
 E--> 158 cccccagtgc aagaccgct tcaagcgct caaggggtgc gcgcgcgtgc ccggggacga  
 159 480  
 E--> 160 ggaggaggac ggcgtcgacg acctggagaa cgagttcaac tggagcgaca agcacgactc  
 161 540  
 E--> 162 ccagtacctc gccgagtcca tgctccacgc ccacatgagc tacggccgcg gcgccgacct  
 163 600

*same  
env*

*same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

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 165 660  
 E--> 166 gatggtcgat gacatcccgc cggaccagca cgcccttggt cctcgttcg tgggtggcgg  
 167 720  
 E--> 168 ggggaagagg attcaccctc tcccgtagcg ggatcccaac cttcctgtgc aaccgaggtc  
 169 780  
 E--> 170 tatggaccct tccaaggatc tcgccgcata tggctacggg agcgtagcat ggaaggagag  
 171 840  
 E--> 172 gatggagagc tggaagcaga agcaggagag gatgcaccag acgaggaacg atggcggcgg  
 173 900  
 E--> 174 cgatgatggt gatgatgcag atctaccact aatggatgaa gctagacagc cattgtccag  
 175 960  
 E--> 176 aaagatcccg cttccttcaa gccaaatcaa cccctatagg atgattataa taattcggct  
 177 1020  
 E--> 178 agtgggttttg tgtttcttct tccactaccg agtgatgcat ccggtgcctg atgcatttgc  
 179 1080  
 E--> 180 tttatggctc atatctgtga tctgtgaaat ttggtttgcc atgtcttga ttcttgacca  
 181 1140  
 E--> 182 gtttccaaag tggtttctca tcgagaggga aacctatctt gaccggctga gtttaagggt  
 183 1200  
 E--> 184 tgacaaggaa gggcatcctt ctcaactcgc ccctgttgat ttctttgtca gtacgggtga  
 185 1260  
 E--> 186 tcccttgaag gaacctccat tggtcactgc taatactgtt ctatctatcc tttcgggtga  
 187 1320  
 E--> 188 ttatccagtt gataagggtt catgctacgt ttctgatgat ggtgctgcca tgcgtacatt  
 189 1380  
 E--> 190 tgaagcattg tctgaaacat ctgaatttgc aaagaaatgg gttcctttct gcaaaagata  
 191 1440  
 E--> 192 tagccttgag cctcgtgctc cagagtggta cttccaacag aagatagact acctgaaaga  
 193 1500  
 E--> 194 caagggtggcg ccaaactttg ttagagaacg gagagcaatg aagagagagt atgaggaatt  
 195 1560  
 E--> 196 caaggtcaga atcaatgcct tgggttgctaa agcccaaaag gttcctgagg aaggatggac  
 197 1620  
 E--> 198 aatgcaggat ggaactccat ggcccggaaa taatgtccgt gatcatcctg gaatgattca  
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 201 1740  
 E--> 202 ttatgtttca agagaaaaac ggccaggcta caaccatcac aagaaggctg gtgctatgaa  
 203 1800  
 E--> 204 tgcatgggtc cgagtctctg ctgtactaac taatgtcctt tatttgctga acttggattg  
 205 1860  
 E--> 206 tgatcactat atcaataata gtaaggctat aaaggaagca atgtgtttta tgatggatcc  
 207 1920  
 E--> 208 tttgcttga aagaaagttt gctatgtgca gtttcctcaa agatttgatg ggattgatcg  
 209 1980  
 E--> 210 ccatgatcga tatgctaaca gaaatgttgt ctttttcgat atcaacatga aagggtttga  
 211 2040  
 E--> 212 tggatatccag ggccaattt atgtgggtac tggatgtgtc ttcagaaggc aggcattata

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

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E--> 214 tggctacgat gctcccaaaa caaagaagcc accatcaaga acttgcaact gctggccaaa  
215 2160  
E--> 216 gtggtgcatt tgctgttgct gttttggtta caggaagacc aagaagaaga ccaagacctc  
217 2220  
E--> 218 taaacctaaa ttgagaaga taaagaaact ttttaagaaa aaggaaaatc aagccctgc  
219 2280  
E--> 220 atatgctctt ggtgaaattg atgaagccgc tccaggagct gaaaatgaaa aggctagtat  
221 2340  
E--> 222 tgtaaatcaa cagaagttgg aaaagaaatt tggccagtct tcagtttttg ttgcatccac  
223 2400  
E--> 224 acttcttgag aatggtggaa ccctgaagag tgccagtcca gcttctcttc tgaaggaagc  
225 2460  
E--> 226 tatacatgtc atcagttgtg gatatgaaga caaaacaggc tggggaaaag atattggttg  
227 2520  
E--> 228 gatttatgga tcagtcacag aagatattct tactgggttt aagatgcact gccatggttg  
229 2580  
E--> 230 gcggtcaatt tactgcatac ctaaacgggc cgcttcaaa ggttccgcac ctctcaatct  
231 2640  
E--> 232 ttccgatcgt cttcaccagg ttcttcggtg ggctcttggt tcaattgaaa ttttcttcag  
233 2700  
E--> 234 caaccactgc cctctctggt atgggtatgg tgggtgacta aagttcctgg aaaggttttc  
235 2760  
E--> 236 gtacattaac tccatcgat acccttgga atctatcccg ctcttgccct attgcacatt  
237 2820  
E--> 238 gcctgccatc tgcttgctga cagggaatt tatcacgcca gagcttaaca atgttgccag  
239 2880  
E--> 240 cctctggttc atgtcacttt tcatctgcat ttttgctacg agcatcctgg aaatgagatg  
241 2940  
E--> 242 gagtggtgta ggcacgatg actggtggag aaacgagcag ttttggttca ttggaggcgt  
243 3000  
E--> 244 gtcttcacat ctctttgctg tgttcaggg actcctcaag gtcatactg gtgtagacac  
245 3060  
E--> 246 gagcttcaact gtgacatcca agggcggaga cgacgaggag ttctcagagc tgtacacatt  
247 3120  
E--> 248 caaatggacg acccttctga tacctccgac aaccctgctc ctactgaact tcattggagt  
249 3180  
E--> 250 ggtagctggc atctccaatg cgatcaacaa cggatatgaa tcatggggcc ccctgttcgg  
251 3240  
E--> 252 gaagctcttc tttgcatttt gggatgacgt ccatctttac ccgttctca agggctctgt  
253 3300  
E--> 254 tgggaggcag aacaggacgc caacgattgt cattgtctgg tccatcctoc tggcttcgat  
255 3360  
E--> 256 cttctcgtg ctttgggtcc ggatcgaccc gttccttgcg aaggatgatg gtcccctggt  
257 3420  
E--> 258 ggaggagtgt ggtctggatt gcaactagga ggtcagcacg tggacttccc cgtcagtgtg  
259 3480  
E--> 260 tggatgaaga agtatttttg agatgtttt gtgcccata ttttttttc aatttttgc  
261 3540

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

E--> 262 cctctgtaga tagaacaag gggagaagg gaaaaaagt acttgatattt cttttgttcc  
 263 3600  
 E--> 264 atggtggtgg tgggtggtggg cggctcagcc tcgtgagtgc agtattgggc aaaccggagg  
 265 3660  
 E--> 266 ctgcggaac cttgtgcagt tcggccacga atatactagg gaagatcgcg accaatcaat  
 267 3720  
 E--> 268 caatcgatga ccgagttcaa ttgttcagca aaaaaaaaaa aaaaaaaaaa aaaaaa  
 269 3776  
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 494 <211> LENGTH: 1189  
 495 <212> TYPE: DNA  
 496 <213> ORGANISM: Zea mays  
 498 <400> SEQUENCE: 5  
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 500 60  
 E--> 501 cctgacgggg ttcaagatgc actgccgggg gtggaagtcc gtgtactgca cgccgacacg  
 502 120  
 E--> 503 gccggcggttc aaggggtcgg cgcccatcaa cttgtctgat cgtctccacc aggtgctgcg  
 504 180  
 E--> 505 ctgggcgctg gggtcggtgg agatcttcat gagccgccac tgcccgctct ggtacgccta  
 506 240  
 E--> 507 cggcgcccgcg ctcaagtggc tggagcgctt cgcctacacc aacaccatcg tgtaccctt  
 508 300  
 E--> 509 caccctccatc ccgctcctcg cctactgcac catccccgcc gtctgcctgc tcaccggcaa  
 510 360  
 E--> 511 gttcatcatt cccacgctga acaacctcgc cagcatctgg ttcacgcgcg tcttctctgc  
 512 420  
 E--> 513 catcatcgcg acgagcgctc tggagctgcg gtggagcggg gtgagcatcg aggactgggt  
 514 480  
 E--> 515 gcgcaacgag cagttctggg tcatcggcgg cgtgtccgcg catctcttcg ccgtgttcca  
 516 540  
 E--> 517 gggcttctct aaggttctgg gcggcggtga caccagcttc accgtcacct ccaaggcggc  
 518 600  
 E--> 519 cggcgacgag gccgacgct tcggggacct ctacctcttc aagtggacca cctgctggt  
 520 660  
 E--> 521 gccccccacc acgctcatca tcatcaacat ggtgggcatc gtggccggcg tgtccgacgc  
 522 720  
 E--> 523 cgtcaacaac ggctacggct cctggggccc gctcttcggc aagctcttct tctcctctg  
 524 780  
 E--> 525 ggtcatcgtc caccctctacc cgttcctcaa ggggctcatg gggaggcaga accggacgcc  
 526 840  
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 528 900  
 E--> 529 gatcgacccg tttatcccga aggccaaggg ccccatcctc aagccatgcg gaggcgagtg  
 530 960  
 E--> 531 ctgagctcac ctagctacct tcttggtgca tgtacggacg ccgccgtgcg tttggacata  
 532 1020  
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 534 1080

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## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

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536 1140
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538 1189
606 <210> SEQ ID NO: 7
607 <211> LENGTH: 3786
608 <212> TYPE: DNA
609 <213> ORGANISM: Zea mays
611 <400> SEQUENCE: 7
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613 60
E--> 614 agcacaaccc ccacccgccca cagccgcgctg cgcattgtgag cggctgcgcgc gcccgggaga
615 120
E--> 616 ccagaggagg ggaggactac gtgcatttcg ctgtgcgcgc gcccggggggt tcgtgcgcga
617 180
E--> 618 gcgagatccg gcggggcggg gcggggggcc tgagatggag gctagcgcg gcgtggtggc
619 240
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621 300
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623 360
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625 420
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627 480
E--> 628 ctacaagcgc ctcaagggt gcccgcggt ggccggcgac gaggaggagg acggcgtcga
629 540
E--> 630 cgacctggag ggcgagttcg gcctgcagga cggcgccgc caccaggacg acccgagta
631 600
E--> 632 cgtcgccgag tccatgctca gggcgagat gagctacgac cgcggcgcg acgcgcaccc
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635 720
E--> 636 cccgccggag cagcacgcgc tcgtgcgcgc ctacatgagc ggcgggcgcg gcgggggcaa
637 780
E--> 638 gaggatccac ccgctccctt tcgcagatcc caaccttcca gtgcaaccga gatccatgga
639 840
E--> 640 cccgtccaag gatctggccg cctacggata tggcagcgtg gcctggaagg agagaatgga
641 900
E--> 642 gggctggaag cagaagcagg agcgccctga gcatgtcagg agcgagggtg gcggtgattg
643 960
E--> 644 ggatggcgac gatgcagatc tgccactaat ggatgaagct aggcagccat tgtccagaaa
645 1020
E--> 646 agtccctata tcatcaagcc gaattaatcc ctacaggatg attatcggtt tccggttggg
647 1080
E--> 648 ggttttgggt ttcttcttcc actaccgagt gatgcatccg gcgaaagatg catttgcatt
649 1140
E--> 650 gtggtcata tctgtaatct gtgaaatctg gtttgcgatg tcctggattc ttgatcagtt
651 1200

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*same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

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 653 1260  
 E--> 654 caaggaaggt caaccctctc agcttgcctc aatcgacttc tttgtcagta cggttgatcc  
 655 1320  
 E--> 656 cacaaaggaa cctcccttgg tcacagcgaa cactgtcctt tccatccttt ctgtggatta  
 657 1380  
 E--> 658 tccggttgag aaggtctcct gctatgtttc tgatgatggg gctgcaatgc ttacgtttga  
 659 1440  
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 663 1560  
 E--> 664 ggttgtctgt tcatttgta gggagaggag ggcgatgaag agagaatacg aggaattcaa  
 665 1620  
 E--> 666 ggtaaggatc aatgccttgg ttgcaaaagc ccaaaagggt cctgaggaag gatggacaat  
 667 1680  
 E--> 668 gcaagatgga agcccctggc ctggaaacaa cgtacgcgat catcctggaa tgattcaggt  
 669 1740  
 E--> 670 attccttggc caaagtggcg gtcgtgatgt ggaaggaaat gagttgcctc gcctggttta  
 671 1800  
 E--> 672 tgtctogaga gaaaagaggc caggttataa ccatcacaag aaggctgggt ccatgaatgc  
 673 1860  
 E--> 674 actgggtcctg gtctctgctg tottatcaaa tgctgcatac ctattgaact tggactgtga  
 675 1920  
 E--> 676 tcactacatc aacaatagca aggcataaa agaggctatg tgtttcatga tggatccttt  
 677 1980  
 E--> 678 ggtggggaag aaagtgtgct atgtacagtt ccctcagagg tttgatggta ttgacaaaaa  
 679 2040  
 E--> 680 tgatogatac gctaacagga acgttgtctt ttttgacatc aacatgaaag gtttgacagg  
 681 2100  
 E--> 682 tattcaagga ccatttatg tgggtactgg atgtgttttc agacggcagg cactgtatgg  
 683 2160  
 E--> 684 ttatgatgct cctaaaacga agaagccacc atcaagaact tgcaactgct ggcccaagtg  
 685 2220  
 E--> 686 gtgcctctct tgctgctgca gcaggaacaa gaataaaaag aagactacaa aaccaaagac  
 687 2280  
 E--> 688 ggagaagaag aaaagattat ttttcaagaa agcagaaaac ccatctcctg catatgcttt  
 689 2340  
 E--> 690 ggggtgaaatt gatgaaggtg ctccaggtgc tgatatcgag aaggccggaa tcgtaaatca  
 691 2400  
 E--> 692 acagaaacta gagaagaaat ttgggcagtc ttctgttttt gtgcgatcaa cacttcttga  
 693 2460  
 E--> 694 gaacggaggg accctgaaga ggcgaagtc agcttctctt ctgaaggaag ctatacatgt  
 695 2520  
 E--> 696 tatcagctgc ggctacgaag acaagaccga ctggggaaaa gagattggct ggatttacgg  
 697 2580  
 E--> 698 atogatcaca gaggatatct tgactggatt taagatgcac tgccatggct ggcggtctat  
 699 2640  
 E--> 700 ttactgcac ccgaagcggc ctgcattcaa aggttctgct cctctgaacc tttccgaccg



## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

```

701 2700
E--> 702 tcttcaccag gtccttoget gggcccttgg gtccgtcgaa atttttcttca gcaagcactg
703 2760
E--> 704 cccacttttg tacggatacg gcggcgggct aaaattcctg gaaaggtttt ottatatcaa
705 2820
E--> 706 ctccatcggt tatccctgga cgtccattcc tctcctgggt tactgtacct tgccctgcat
707 2880
E--> 708 ctgcctgctc acggggaagt ttatcacacc agagcttacc aatgtcgcca gtatctgggt
709 2940
E--> 710 catggcactt ttcattctgca tctccgtgac cggcatcctg gaaatgaggt ggagtggcgt
711 3000
E--> 712 ggccatcgac gactggtgga ggaacgagca gttctgggtc atcggaggcg tttcggcgca
713 3060
E--> 714 tctgttcgag gtgttcagg gcctgctgaa ggtgttcgcc ggcatcgaca cgagcttcac
715 3120
E--> 716 cgtgacgtcg aaggcggggg acgacgagga gttctcggag ctgtacacgt tcaagtggac
717 3180
E--> 718 caccctgctg atacccccga ccacgctcct cctgctgaac ttcacggggg tgggtggccgg
719 3240
E--> 720 gatctcgaac gcgatcaaca acgggtacga gtcgtggggc cccctgttcg ggaagctctt
721 3300
E--> 722 ctctgccttc tgggtgatcg tccacctgta cccgttcctc aagggtcttg tggggaggca
723 3360
E--> 724 gaacaggacg ccgacgatcg tcatcgtctg gtccatcctg ctggcctcga tcttctcgt
725 3420
E--> 726 cctgtgggtc cgcgtcgacc cgttcctcgc caagagcaac ggcccgctcc tggaggagt
727 3480
E--> 728 tggcctggac tgcaactgaa gtggggggccc cctgtcactc gaagttctgt caogggcgaa
729 3540
E--> 730 ttacgcctga ttttttgttg ttgttgttgt tggaattctt tgctgtagat agaaaccaca
731 3600
E--> 732 tgtccacggc atctctgctg tgtccattgg agcaggagag aggtgcctgc tgctgtttgt
733 3660
E--> 734 tgagtaaaatt aaaagtttta aagttataca gtgatgcaca ttccagtgcc cagtgtattc
735 3720
E--> 736 cctttttaca gtctgtatat tagcgacaaa ggacatattg gttaggagtt tgattctttt
737 3780
E--> 738 gtaaaaa
739 3786
966 <210> SEQ ID NO: 9
967 <211> LENGTH: 3936
968 <212> TYPE: DNA
969 <213> ORGANISM: Zea mays
971 <400> SEQUENCE: 9
E--> 972 cttctccctc gtccgtgagg cgtggcgagg ctcggcggtc ggtgagaaac cactcggggg
973 60
E--> 974 atgaggatct gctgctagag tgagaggagc tacggtcagt atcctctgcc ttcgtcggcg
975 120
E--> 976 gcggaagtgg aggggaggaa gcgatggagg cgagcgccgg gctgggtggc ggctcccaca

```

*same**same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

```

977 180
E--> 978 accgcaacga gctcgtcgtc atccgccgcg acggcgatcc cgggccgaag ccgccgcggg
979 240
E--> 980 agcagaacgg gcaggtgtgc cagatttgcg gcgacgacgt cggccttgcc cccggcgggg
981 300
E--> 982 accccttcgt ggcgtgcaac gagtgcgcct tccccgtctg ccgggactgc tacgaatacg
983 360
E--> 984 agcgccggga gggcacgcag aactgcccc agtgcaagac tcgatacaag cgcctcaagg
985 420
E--> 986 gctgccaacg tgtgaccggt gacgaggagg aggacggcgt cgatgacctg gacaacgagt
987 480
E--> 988 tcaactggga cggccatgac tcgcagtctg tggccgagtc catgctctac ggccacatga
989 540
E--> 990 gctacggccg tggaggtgac cctaattggcg cgccacaagc tttccagctc aaccccaatg
991 600
E--> 992 ttccactcct caccaacggg caaatggtgg atgacatccc accggagcag caccgcgtgg
993 660
E--> 994 tgccttcttt catgggtggg gggggaaaga ggatacatcc cttccttat gcggatccca
995 720
E--> 996 gcttacctgt gcaaccagg tctatggacc catccaagga tcttctgca tatgggtatg
997 780
E--> 998 gtagtggtgc ttggaaggaa cggatggaga attggaagca gagacaagag aggatgcacc
999 840
E--> 1000 agacggggaa tgatggtggt ggtgatgatg gtgacgatgc tgatctacca ctaatggatg
1001 900
E--> 1002 aagcaagaca acaactgtcc aggaaaattc cacttccatc aagccagatt aatocatata
1003 960
E--> 1004 ggatgattat cattattcgg cttgtggttt tggggttctt cttccactac cgagtgatgc
1005 1020
E--> 1006 atccggtgaa tgatgcattt gctttgtggc tcatatctgt tatctgtgaa atctggtttg
1007 1080
E--> 1008 ccatgtcttg gattcttgat caattcccaa agtggttccc tattgagaga gagacttacc
1009 1140
E--> 1010 tagaccgget gtcactgagg ttcgacaagg aaggccagcc atctcaactt gctccaattg
1011 1200
E--> 1012 atttctttgt cagtacggtt gatcccttaa aggaacctcc tttggtcaca acaaatactg
1013 1260
E--> 1014 ttctatctat cctttcgggtg gattatcctg ttgataaggt ttcttgetat gtttctgatg
1015 1320
E--> 1016 atggtgctgc aatgctaacg tttgaagcat tatctgaaac atctgaattt gcaaagaaat
1017 1380
E--> 1018 gggttccttt ctgcaaacgg tacaatattg aacctcgcgc tccagagtgg tacttccaac
1019 1440
E--> 1020 agaagataga ctacttgaaa gacaagggtg cagcaaactt tgtaggggag aggagagcaa
1021 1500
E--> 1022 tgaagagaga gtatgaggaa ttcaagggtg gaatcaatgc cttagttgcc aaagccaga
1023 1560
E--> 1024 aagttcctga agaaggatgg acaatgcaag atggaacccc ctggcctgga aacaatgttc
1025 1620

```

*same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

E--> 1026 gtgatcatcc tggaatgatt caggtcttcc ttggccaaag cggaggcctt gactgtgagg  
 1027 1680  
 E--> 1028 gaaatgaact gccacgattg gtttatgttt ctagagagaa acgaccaggc tataaccatc  
 1029 1740  
 E--> 1030 ataagaaagc tgggtgctatg aatgcattgg tccgagtctc tgctgtacta acaaagtctc  
 1031 1800  
 E--> 1032 catatttggt aaacttggat tgtgatcact acatcaacaa cagcaaggct ataaaggaag  
 1033 1860  
 E--> 1034 caatgtgttt tatgatggac cctttactag gaaagaaggt ttgctatgta cagttccctc  
 1035 1920  
 E--> 1036 aaagatttga tgggattgat cgccatgacc gatatgctaa ccggaatgtt gtcttttttg  
 1037 1980  
 E--> 1038 atatcaacat gaaaggtttg gatggtattc aggtccaat ttatgttggg actggatgtg  
 1039 2040  
 E--> 1040 tattttagaag gcaggcatta tatggttatg atgccccaa aacaaagaag ccaccatcaa  
 1041 2100  
 E--> 1042 ggacttgcaa ctgctggccc aagtgggtgct tttgctgttg ctgctttggc aataggaagc  
 1043 2160  
 E--> 1044 aaaagaagac taccaaacc aaacagaga agaaaaagtt attatttttc aagaagaag  
 1045 2220  
 E--> 1046 agaaccaatc ccctgcatat gctcttggtg aaattgacga agctgctcca ggagctgaga  
 1047 2280  
 E--> 1048 atgaaaaggc cggatttgta aatcaacaaa aattagaaaa gaaatttggc caatcttctg  
 1049 2340  
 E--> 1050 tttttgttac atccacactt ctcgagaatg gtggaacctt gaagagtga agtctgctt  
 1051 2400  
 E--> 1052 ctcttttgaa agaagctata catgtcatta gttgtggtta tgaagacaag acagactggg  
 1053 2460  
 E--> 1054 gaaaagagat tggctggatc tatggatcag ttacagaaga tattctaact ggtttcaaga  
 1055 2520  
 E--> 1056 tgcaattgtca tggttggcgg tcaatttact gcatacctaa acggggtgca ttcaaagggt  
 1057 2580  
 E--> 1058 ctgcacctct gaatctttca gatcgtcttc accagggtgct tcgggtgggt cttgggtcta  
 1059 2640  
 E--> 1060 ttgagatctt cttcagcaat cattgccttc tttggtatgg gtatggtggc ggtctgaaat  
 1061 2700  
 E--> 1062 ttttgaaag attttctac atcaactcca tcgtgtatcc ttggacatct attcccctct  
 1063 2760  
 E--> 1064 tggcttactg tacattgcct gccatctgtt tattgacagg gaaatttata actccagagc  
 1065 2820  
 E--> 1066 tgaataatgt tgccagcctg tggttcatgt cactttttat ctgcattttt gctacgagca  
 1067 2880  
 E--> 1068 tcctagaaat gagatggagt ggtgttgga ttgatgactg gtggaggaat gagcagttct  
 1069 2940  
 E--> 1070 gggtcattgg aggtgtgtcc tcacacctct ttgctgtgtt ccagggaact ctcaagggtca  
 1071 3000  
 E--> 1072 tagctggtgt tgatacaagc ttcaccgtga catcaaaggg tggagatgat gaggagtctc  
 1073 3060  
 E--> 1074 cagagctata tacattcaaa tggactacct tattgatacc tctaccacc ttgcttctat

*same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

```

1075 3120
E--> 1076 tgaacttcat tgggtgtggtc gctggcggtt caaatgcgat caataacgga tatgagtcac
1077 3180
E--> 1078 ggggccccct ctttggaag ctattctttg cattttgggt gattgtccat ctttatccct
1079 3240
E--> 1080 ttctcaaagg tttggttga aggcaaaaca ggacaccaac gattgtcatc gtctgggtcca
1081 3300
E--> 1082 ttctgtggc ttcaatcttc tcgctccttt gggttcggat tgatcctttc cttgcgaagg
1083 3360
E--> 1084 atgatggtcc gcttcttgag gagtgtggtt tggattgcaa ctaggatgtc agtgcacag
1085 3420
E--> 1086 ctcccccaat ctgcatatgc ttgaagtata tttctggtg tttgtccca tattcagtgt
1087 3480
E--> 1088 ctgtagataa gagacatgaa atgtcccaag tttcttttga tccatggtga acctacttaa
1089 3540
E--> 1090 tatctgagag atatactggg ggaaaatgga ggctgcggca atccttgtgc agttgggccc
1091 3600
E--> 1092 tgggaatacag catatgcaag tgtttgattg tgcagcatte tttattactt ggtcgcaata
1093 3660
E--> 1094 tagatgggct gagccgaaca gcaaggattt ttgattctgc actgctcccg tgtacaaact
1095 3720
E--> 1096 tggttctcaa taaggcaggc aggaatgcat ctgccagtgg aacagagcaa cctgcacatt
1097 3780
E--> 1098 atttatgtat gcctgttcat tggagggett gttcattaca tgttcgtcta tactagaaaa
1099 3840
E--> 1100 aacagaatat tagcattaat ctatagttaa ttaaagtatg taaatgcgcc tgttttttgt
1101 3900
E--> 1102 tgtgtactgt aatcatctga gttgggtttg tgaaaa
1103 3936
1315 <210> SEQ ID NO: 11
1316 <211> LENGTH: 1138
1317 <212> TYPE: DNA
1318 <213> ORGANISM: Oryza sativa
1320 <400> SEQUENCE: 11
E--> 1321 cgctgtccc ggcgatggac gtgttcgtca ccaccgccga ccccgacaag gagccgcgcg
1322 60
E--> 1323 tcgccacggc gaacaccgtg ctgtccatat atcctcgccg cgggctaccc cgccggcaag
1324 120
E--> 1325 gtgacgtgct atatttccga cgacgcaggc gcggaggatg cacgtaacgc ggtcgtggag
1326 180
E--> 1327 gcggcccggg tcgcggcgct ttgggtgtcg ttctgccgga agcacggcgt cgagccgagg
1328 240
E--> 1329 aacctggagg cgtacttcaa cgccggcgag ggtggtggtg gcaaggcgaa ggtggtggcg
1330 300
E--> 1331 agggggagct acaggggat ggctggccg gagctggtgc gcgacaggag acgggtgcgc
1332 360
E--> 1333 cgcgagtacg aggagatgcg gctgcggatc gacgcgctgc aggccgccga tgcgcgcgcg
1334 420
E--> 1335 cggcgccgcg gcgcggccga tgaccacgcc ggagttgtgc aggtactgat cgattttgct

```

*same**same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

```

1336 480
E--> 1337 gggagcgtgc cacagctcgg cgttgccaac gggagcaagc tcatcgacgt cgcctctgtc
1338 540
E--> 1339 gacgtgtgcc tcccggcgct tgtgtacgtg tgccgcgaga agcgccgcgg ccacgcgcac
1340 600
E--> 1341 caccggaagg cgggcgccat gaacgcgcgc ttcctcctcg acctcgactg cgactactac
1342 660
E--> 1343 gtcaacaact cgcaggccct ccgcgcgggc atctgcttca tgatcgaacg cggcgggcggc
1344 720
E--> 1345 ggagccgccc aagacgccgg cgcggtcgcg ttcgtccagt tcccgcagcg ggtcgacggc
1346 780
E--> 1347 gtcgatcccc ggcaccgcta cgccaaccac aaccgcgtcc tcttcgactg caccgagctc
1348 840
E--> 1349 ggctctgacg gcctccaggg ccccatctac gtcggcaccg gctgcttgtt ccgcctgtc
1350 900
E--> 1351 gcgctctaca gcgtcgacct gccgcgctgg agaccgcggc gttcattggg ctgtcgccca
1352 960
E--> 1353 ctgggagaag acgagcggct atggtccagg atgaaacaaa tggtaatatt aagtgttcca
1354 1020
E--> 1355 aggtgaaaaa ctcagctaaa acctgacca agctgtaaca tgggtaaaaa tatatggccc
1356 1080
E--> 1357 aaatgaaat ttactttttt ttttttacca aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa
1358 1138
1432 <210> SEQ ID NO: 13
1433 <211> LENGTH: 3517
1434 <212> TYPE: DNA
1435 <213> ORGANISM: Glycine max
1437 <400> SEQUENCE: 13
E--> 1438 gcacgagcca acaacaacac ccttatgtgg acacattagg tgaggttcaa cagctagcac
1439 60
E--> 1440 caatcttctt tcataaaaca caaacctttg atcacacaat ctcaccttaa tttgtgttgt
1441 120
E--> 1442 tgttgtgcca ttcccatatt gtccattca ctaagacatg gaagccagcg ctggactggt
1443 180
E--> 1444 cgctgggtca cataaccgca atgagctagt tgtcattcat ggccatgaag agccgaaggc
1445 240
E--> 1446 tttgaagaac ttggatgggc aagtgtgtga gatttgtggt gatggcgtgg gactcacggt
1447 300
E--> 1448 ggatggagac ttgtttgtgg cttgcaatga gtgtggtttt ccagtgtgca ggccttgcta
1449 360
E--> 1450 tgagtatgaa aggagagaag gaagccacct ttgccacag tgcaaaacca gatacaagcg
1451 420
E--> 1452 tctcaaaggg agcccccgag tggaggggaga tgatgatgaa gaggatgtgg atgatattga
1453 480
E--> 1454 gcatgaattc aatattgatg agcaaaagaa caagcatggc caggttgacg aagccatgct
1455 540
E--> 1456 tcatgggagg atgagctatg gaagaggtcc tgaagatgat gacaattccc agttcccaac
1457 600
E--> 1458 acctgtcatt gctggtggtc gttctaggcc tgtaagtggg gagttcccaa tatcatctaa

```

*same**same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

```

1459 660
E--> 1460 tgcttatggg gatcagatgt tatectcttc actgcataaa agagtgcac ccatatccagt
1461 720
E--> 1462 gtctgaacct ggaagtgcaa gatgggacga aaaaaaaaga agatggatgg aaagatagaa
1463 780
E--> 1464 tggatgactg gaaattgcag caaggcaatt tggggcctga accggatgaa gatccagatg
1465 840
E--> 1466 cagccatggt agatgaagca aggcaaccac tgtcaaggaa agtgccaata gcatccagca
1467 900
E--> 1468 aaatcaatcc atatagaatg gtgattgtgg cagctctggt tattcttget ttcttctca
1469 960
E--> 1470 gatacagact catgaacca gtacatgatg ccctggggct atggctaacc tctatcatat
1471 1020
E--> 1472 gtgaaatctg gtttgctttt tcatggatcc tggatcagtt tcccaaattg tttoccattg
1473 1080
E--> 1474 atagagagac ctacottgac cgtctttcca tcaggatga gcgtgaagggt gaaccaaaca
1475 1140
E--> 1476 tgcttgctcc tgtagatggt tttgttagta ccgtggatcc catgaaggaa cctcctctgg
1477 1200
E--> 1478 ttacagcaaa cactgttctt tcaatcttgg ccatggatta cccggttgat aaaatatcat
1479 1260
E--> 1480 gctacatttc tgatgatgga gcctcaatgt gtacatttga gtccttatca gaaactgcag
1481 1320
E--> 1482 agtttgctag aaagtgggta ccgttttgta agaaatttcc catagaacct cgggcacctg
1483 1380
E--> 1484 agatgtactt cagcgagaag attgactacc taaaggacaa agtgcaaccc acctttgtta
1485 1440
E--> 1486 aggagcgtcg agctatgaag agggaatacg aagagttaa ggtaggatc aatgcacttg
1487 1500
E--> 1488 ttgctaaggc ccagaaagtt cctcaggag gatggatcat gcaggatggg acaccatggc
1489 1560
E--> 1490 cagggaataa cactaaggat catcctggta tgattcaagt gtttcttggg agcagtggag
1491 1620
E--> 1492 gtcttgatac tgaaggaaac caacttctc gccttgttta tgtttccaga gagaaaaggc
1493 1680
E--> 1494 ctgggttttca acaccacaag aaagctggtg ccatgaatgc tctgggtcgg gtatctgctg
1495 1740
E--> 1496 ttctcacaaa tgctccttcc atgttgaact tggattgtga tcaactatgtc aataacagca
1497 1800
E--> 1498 aggtgcccag agaggccatg tgcttcttga tggaccaca aactgggaag aaggtctgct
1499 1860
E--> 1500 atgtccagtt tctcaaaga tttgatggta ttgatacaca tgatcggtat gccaacagga
1501 1920
E--> 1502 acacagtttt ctttgatatt aacatgaagg gtctagatgg tattcaagggt cctgtatatg
1503 1980
E--> 1504 tggggactgg atgtgttttc aggaggcaag ctttgatgg ctataatcct cccaagggtc
1505 2040
E--> 1506 caaagcgtcc aaaaatggta agctgtgatt gttgccctg ttttgggaagc cgcaagaagt
1507 2100

```

*same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

E--> 1508 ataaggagaa gaatgatgca aatggagagg ctgcaagcct aaaagggatg gatgatgaca  
 1509 2160  
 E--> 1510 aagaggtggt gatgtcccaa atgaattttg agaagaaatt tggacaatcc tctatttttg  
 1511 2220  
 E--> 1512 tgactttctac cttgatggaa gaggggtggtg tgcctccttc ttcaagtcca gctgccctgc  
 1513 2280  
 E--> 1514 ttaaagaagc cattcatgtg attagctgtg gatatgaaga taaaactgaa tgggggacttg  
 1515 2340  
 E--> 1516 agcttggttg gatctatgga tctatcacag aagatattct aacagggtttt aagatgcatt  
 1517 2400  
 E--> 1518 gccgtgggtg gaggtccatt tattgtatgc caaagagagc tgcattcaag ggtactgctc  
 1519 2460  
 E--> 1520 ctatcaactt gtcagatcgt ctcaaccagg ttcttcgttg ggcacttggg tccattgaga  
 1521 2520  
 E--> 1522 ttttcttttag tcaccattgc cctctatggt atggcttcaa ggaaaagaag ctaaagtggc  
 1523 2580  
 E--> 1524 ttgagagatt tgcctatgca aacacaactg tctatccatt cacctccatt cctctagtgtg  
 1525 2640  
 E--> 1526 cctactgtat tcttcagca gtttgtttac tcaactgaca attcatcatg ccaccgatta  
 1527 2700  
 E--> 1528 gcacctttgc tggtttgtac tttgttgctc tcttctcctc aatcattgca actgggtattc  
 1529 2760  
 E--> 1530 ttgagttgaa atggagtgga gtgagcattg aggaatggtg gagaaatgag cagttttggg  
 1531 2820  
 E--> 1532 tcattgggtg tgtatcagct cacctctttg ctgttataca aggtctgcta aaggttcttg  
 1533 2880  
 E--> 1534 ctggaattga caccaatttc actgttacat caaaggcaac agatgatgaa gagtttgagg  
 1535 2940  
 E--> 1536 aattgtacac ctttaagtgg actacactct tgattcctcc aaccactatt ttgatcatta  
 1537 3000  
 E--> 1538 acattgtttg tgttgttgct ggaatctcag atgccataaa caatgggtac caatcctggg  
 1539 3060  
 E--> 1540 gaccactctt tggaaagctc ttcttttctc tctgggtgat tgtccatctc tatccattcc  
 1541 3120  
 E--> 1542 ttaaagggtt gatgggtcgc caaaatcgca caccacat tgttgtgatt tggtcagtgc  
 1543 3180  
 E--> 1544 tattggcctc tattttctcc ttactttggg taagaattga tccatttgct ctcaagacta  
 1545 3240  
 E--> 1546 agggacctga taccaagcta tgtggaatca actgctaaaa aagactgctt tccctatagt  
 1547 3300  
 E--> 1548 attattcttt aaaagatgta tgtaggttac atacattctt ggtttcacia accaaciaag  
 1549 3360  
 E--> 1550 tggcaatgca caaggatcaa taaggaaaga gtgaaaattt tgtgtatcat aaatgagtgt  
 1551 3420  
 E--> 1552 tatcattttt gtaaatgttc tcaaggacat ctgttttggg tggaaactgcc caaaaattgc  
 1553 3480  
 E--> 1554 agttttatct attcactgga aaaaaaaaaa aaaaaaa  
 1555 3517  
 1763 <210> SEQ ID NO: 15

*same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

1764 &lt;211&gt; LENGTH: 2125

1765 &lt;212&gt; TYPE: DNA

1766 &lt;213&gt; ORGANISM: Glycine max

1768 &lt;400&gt; SEQUENCE: 15

```

E--> 1769 gccaaagctc agaagatgcc agaggaaggt tggacaatgc aggatggaac tccttggcct
1770 60
E--> 1771 ggaaataatc ctagggatca tccgggaatg attcaggtgt ttttaggtca tagtgggggg
1772 120
E--> 1773 ctggatacag atggaaatga gctgcctaga cttgtttatg tttctcgtga gaagcgacca
1774 180
E--> 1775 ggcttccaac atcacaagaa ggctggagct atgaatgctt tgattcgagt ttctgctgtc
1776 240
E--> 1777 ttgaccaatg gtgcataatc tctgaatgtg gattgtgatc actatttcaa taatagcaaa
1778 300
E--> 1779 gccctcaaag aagccatgtg tttcatgatg gatcctgttc ttggaaagaa gacatgctat
1780 360
E--> 1781 gttcaatttc ctcagagatt tgacggcatt gacttgcacg atcgatatgc caatcgcaat
1782 420
E--> 1783 attgtgttct ttgatataca catgaaaggt caggatggtg ttcaggggccc agtctatgtg
1784 480
E--> 1785 ggaactgggt gttgtttcaa taggcaagct ttgtatggtt atgatcctgt tttgactgag
1786 540
E--> 1787 gaagatttgg aacctaacat tattgttaaag agttgttgcg gttctagaaa gaagggaaaag
1788 600
E--> 1789 ggtggcaata agaagtacag tgacaagaag aaggcgatgg gaagaactga atccactgta
1790 660
E--> 1791 cccatattta atatggaaga catagaggag ggtgttgaag gttatgatga tgaaaggaca
1792 720
E--> 1793 ctacttatgt ctcaaaagag cttggagaag cgttttggtc agtctccagt ttttattgct
1794 780
E--> 1795 gccactttca tggagcaggg tggcattcca ccttcaacga accctgcaac tcttcttaag
1796 840
E--> 1797 gaagcaatcc atgttatcag ctgtggttac gaagacaaga cagaatgggg caaagagatt
1798 900
E--> 1799 ggatggatct atggctctgt gacagaagat atcttgactg ggttcaagat gcatgctcgt
1800 960
E--> 1801 ggttggattt ccatctattg catgccacct cgcccagcat ttaaggggtc tgctcctatc
1802 1020
E--> 1803 aatctttctg atcgtctcaa tcagggtgctt cggtgggcct tgggttcaat tgagatcttt
1804 1080
E--> 1805 ctaagcaggc attgtccctt gtggtatggc tacaatggga agttgaagcc tctgatgagg
1806 1140
E--> 1807 cttgcttata ttaacaccat tgtctaccgg ttacacctca tccattgat tgcttactgt
1808 1200
E--> 1809 acgcttcctg cattttgtct tctcacaat aaatttatta ttcttgagat aagcaacttt
1810 1260
E--> 1811 gccagtatgt ggttcattct tctctttgtc tccattttta ccaactcaat tcttgagctt
1812 1320
E--> 1813 aggtggagtg ggttcagtat agaagactgg tggagaaatg aacagttctg ggttatcggt

```

*same*



## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

```

1814 1380
E--> 1815 gggacatctg cgcacatctctt tgctgtgttc caggggcttc taaaagtgtc tgctgggacg
1816 1440
E--> 1817 gatacaaat ttactgttac atcgaaggca tcggacgagg atgggggactt tgccgagctt
1818 1500
E--> 1819 tatgtgttta aatggacatc acttctcatc cctcctacaa cagtgttat tgtgaatttg
1820 1560
E--> 1821 gttgggattg tggctggtgt atcctatgcc ataaacagt gttaccagtc ttgggggtcca
1822 1620
E--> 1823 ctatttggca agctgttctt tgctatctgg gtcattgccc atctataccc attcttgaag
1824 1680
E--> 1825 ggtctcttgg gcaggcaaaa tcgtacccca accattgtta ttgtttggtc cgttcttctt
1826 1740
E--> 1827 gcttcaatat tctccttgct gtgggtgagg attgatccct tcacctctga ctccaacaaa
1828 1800
E--> 1829 ttaaccaatg gtcaatgtgg catcaactgt tagttctctt gtatgattca ttttgtgttg
1830 1860
E--> 1831 ttattccctt ttgcttggag atacacaagg ttgctgtcgt gtatatagca agaattttca
1832 1920
E--> 1833 gcctatcaaa gttgtctgga ggattgaacc cctgaaatag atgggaatgt accctctctg
1834 1980
E--> 1835 tttctattat ttatctacat gttccttaca agaatagtca gtagtaatgt tgagggtgat
1836 2040
E--> 1837 gttatatattt ttccccacag aatataaatt tgttcacgag aatatttaat gaaagccaac
1838 2100
E--> 1839 aaggtcctgt gttgttttgt tcttt
1840 2125
1965 <210> SEQ ID NO: 17
1966 <211> LENGTH: 2890
1967 <212> TYPE: DNA
1968 <213> ORGANISM: Glycine max
1970 <400> SEQUENCE: 17
E--> 1971 gcacgagctc caccagtta atgatgcata tggcttgtgg ttgacatcag tcatctgtga
1972 60
E--> 1973 aatatgggtt gctgtatcat ggataatgga tcagtttcca aaatgggtacc caatacagcg
1974 120
E--> 1975 agaaacatac cttgatcgtc tgtcactcag gtatgaaaaa gaagggaagc catctgagtt
1976 180
E--> 1977 gtccagtgtg gacgtctttg tcagtactgt tgatcccatg aagggaacct cactgattac
1978 240
E--> 1979 agcaaacact gttctatcta tccttgctgt tgattatcca gttgataaag ttgcatgcta
1980 300
E--> 1981 tgtctcagat gatggtgctg ctatgcttac ttttgaagca ctgtctgaga catctgaatt
1982 360
E--> 1983 tgctaggaga tgggttccat tttgtaagaa atacaatatt gagccccggg caccagaatg
1984 420
E--> 1985 gtacttttgt cagaagatgg actatctgaa aaataaagta caccagcat ttgtcaggga
1986 480
E--> 1987 aaggagagca atgaagaggg attatgaaga atttaaggtg aggattaaca gtttgggtggc

```

*same**same*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

```

1988 540
E--> 1989 aacagcacaa aaggttcctg aggatggatg gaccatgcaa gatgggactc cttggcctgg
1990 600
E--> 1991 aaataatgtg aggatcatc ctggcatgat tcaggctctc cttgggcagg atggtgttcg
1992 660
E--> 1993 tgatgttgaa ggaaatgagc taccctgctt ggtctacgtt tctagagaaa agaggccagg
1994 720
E--> 1995 gtttgcacac cacaaaaagg ctggtgcaat gaatgctctg gtacgggctt cagcaattat
1996 780
E--> 1997 cactaatgca ccctatcttc tgaatgttga ttgtgatcac tacattaaca atagcaaggc
1998 840
E--> 1999 acttagagaa gctatgtgtt ttatgatgga tcctcaacta gggaaaaagg tttgctatgt
2000 900
E--> 2001 gcaatttcct cagcgatttg atggaattga tagacatgat agatattcaa acagaaatgt
2002 960
E--> 2003 tgtatttttc gatattaaca tgaaaggatt ggatgggata caaggccaa tatatgtcgg
2004 1020
E--> 2005 aactggatgt gttttcagaa ggtacgcact ttatggatat gatgcacctg ccaagaagaa
2006 1080
E--> 2007 accaccgagc aaaacttgta actgttggcc aaagtgggtc tgctatgtt gtggctctag
2008 1140
E--> 2009 aaagaaaaag aatgccaata gtaagaagga gaaaaagagg aaggtgaagc acagtgaagc
2010 1200
E--> 2011 atcaaagcag atacatgcac ttgaaaatat tgaggcgggg aatgaaggaa ccaacaatga
2012 1260
E--> 2013 gaagacatcc aatctgactc aaacaaagt ttggagagg tttggacagt ctccagtatt
2014 1320
E--> 2015 tgtagcctcc acacttttgg atgatggtg agttccacat ggcgtgagtc ctgcatcact
2016 1380
E--> 2017 tttaaaagaa gccatccagg tcatcagttg tggttatgaa gacaaaacag aatggggaaa
2018 1440
E--> 2019 agaagttggg tggatatatg gttctgtgac agaggatatc ttgactggat ttaaaatgca
2020 1500
E--> 2021 ttgccatggt tggcggctctg tgtattgcat tcctaagcgg cctgcattta aggggtctgc
2022 1560
E--> 2023 gcctatcaac ctttcagatc gtctgcacca agttcttcgg tgggctcttg ggtctgttga
2024 1620
E--> 2025 gatttttttc agcagacatt gtccaatctg gtatggctat ggtggtggat tgaaattgtt
2026 1680
E--> 2027 ggaacgattt tctacatta actcggctcg atatccctgg acttccctcc cattgcttgt
2028 1740
E--> 2029 ctactgtact ctaccagcca tatgccttct gactggaaaa tttatcgtac ccgagattag
2030 1800
E--> 2031 caactatgcc agtcttgtgt tcatggccct cttcatatcc attgcagcaa ctggcatcct
2032 1860
E--> 2033 tgagatgcaa tggggcgggtg ttagcataga cgactgggtg aggaacgaac agttttgggt
2034 1920
E--> 2035 gatcggaggt gtttcttccc atctatttgc cctatttcag ggtttactga aggtcttggc
2036 1980

```

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

E--> 2037 tgggtgtgaac acaaacttca ctgtgacctc aaaagcagca gatgatggag aattctcaga  
 2038 2040  
 E--> 2039 actctacata ttcaagtgga catcactctt gatccctcca atgactttac ttatcatgaa  
 2040 2100  
 E--> 2041 tattgtcggg gtggttgtcg ggatctcaga tgccatcaac aatggttatg actcatgggg  
 2042 2160  
 E--> 2043 acctctcttt ggtagattgt tctttgcatt gtgggtgatc ctccatctct accccttctt  
 2044 2220  
 E--> 2045 gaagggggtt cttggaaaac aagatagaat gcccaaccatt atattggttt ggtcaatcct  
 2046 2280  
 E--> 2047 tctggcctcc atcttgactc tcatgtgggt cagaattaac ccgtttgtgt caagagacgg  
 2048 2340  
 E--> 2049 cccgtgttta gaaatttgtg gattgaattg cgacgagtcg tgaataaaga aaagctgaag  
 2050 2400  
 E--> 2051 aagaaggggtt agttattttt cagctacact gcagtcattg tgaagaatgc agccagcaca  
 2052 2460  
 E--> 2053 tgcttcacaa agttgcacga attttcggat ggaagtttta tttttcgggt gtgtagagat  
 2054 2520  
 E--> 2055 taaagagagg aaggggaggg ggctgacaca ttgttacctt gtaatagggt tttttcattt  
 2056 2580  
 E--> 2057 attctttgat tatattttct gtgggtttta gtgttattct ctttccagtt tcatgtatta  
 2058 2640  
 E--> 2059 taagaaaagag gcattgaatg ataaattatt ccctcttcaa aatgggggat cctcagtcct  
 2060 2700  
 E--> 2061 aagaaaattac ttggtcatat ttttaggtat gggctctgtt ctgtttaaaa ccatttgtaa  
 2062 2760  
 E--> 2063 taccgtcaaa actatggata ttcttgttcc tcagatgtgt ttttgtgttt tattatttaa  
 2064 2820  
 E--> 2065 cactcaggaa ccttttggtt tgattcaatt attcaatggt tggatggcac taaaaaaaaa  
 2066 2880  
 E--> 2067 aaaaaaaaaa  
 2068 2890  
 2226 <210> SEQ ID NO: 19  
 2227 <211> LENGTH: 1733  
 2228 <212> TYPE: DNA  
 2229 <213> ORGANISM: Triticum aestivum  
 2231 <220> FEATURE:  
 2232 <221> NAME/KEY: unsure  
 2233 <222> LOCATION: (262)  
 2234 <223> OTHER INFORMATION: n = a, c, g or t  
 2236 <400> SEQUENCE: 19  
 2237 gaagctatgt gcttccta at ggatccaaac ctaggtccgc aagtctgtta tgtgcagttc 60  
 2238 ccacaaagggt ttgatggat ttgataggaat gatcgatatg caaacaggaa cactgtcttt 120  
 2239 tttgatatta acttgagggg ccttgacggc attcaaggac cagtttatgt gggaactggt 180  
 2240 tgtgttttca acagaacggc tatctatggt tatgagcccc caattaaggc gaagaagcca 240  
 2241 ggtttcttgg catcattatg tnggggcaag aagaaggcaa gcaagtcaaa gaaaaggagc 300  
 2242 tcagataaga aaaagtcgaa caagcatgtg gacagttctg ttccagtatt caatctcgaa 360  
 2243 gacatagagg aggtgttga aggtgctggg tttgatgatg agaaatcagt tctcatgtct 420  
 2244 caaatgagct tagagaagag atttggccag tcagcagcat ttgttgccct cactctgatg 480

same

see p. 19

OK

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

```

2245 gaatatggtg gtgttctca gtcgtccact ccagaatctc ttttgaaaga agctatccat 540
2246 gtcataagtt gtggctatga ggacaagtct gaatggggaa ctgagattgg ttggatctat 600
2247 ggatctgtca cagaagatat tctaactgga ttcaagatgc acgcaagagg ctggcggttca 660
2248 atctattgca tgcccaagcg cccagctttc aagggatctg ccccatcaa tctttcagat 720
2249 cgtctgaatc aagtgtctcg gtgggtctct gggtctgttg aaattctttt cagccggcat 780
2250 tgcccttat ggtatggcta cggaggggcg ctcaagttcc tggagagatt cgcttacatc 840
2251 aacaccacca tttaccact aacctctctc ccgcttctag tctattgtat attgcctgct 900
2252 atctgtctgc tcaactgaaa gttcatcatg ccagagatta gcaactggc cagtatctgg 960
E--> 2253 tttattgccc tcttctttc aattttcgcc actggtatcc ttgagatgaq qtggagtgg
W--> 2254 1020 gttggcattg acgagtggg gaggaatgaa cagttctggg tcattggagg
W--> 2255 tctctctgcc 1080 catctgtttg cgtctttca ggtcttctg aagggtcttg
W--> 2256 caggtatcga caccaacttc 1140 actgtcacct caaaggctaa tgatgaagaa
W--> 2257 ggcgactttg ctgagctcta catgttcaag 1200 tggacgacgc ttcttatccc
W--> 2258 tccgacgacc attttgatca ttaacatggt cgggtgtcgtt 1260 gctggtacct
E--> 2259 cctacgccat caacagtggg taccaatcat gggggccgct ctttgggaag 1320
E--> 2260 ctcttctttg ctttctgggt gattgttcac ttatacccat tctcaaggg tcttatgggc
W--> 2261 1380 aggcaaaacc gcacaccgac gattgtcacc gtctgggctg tctctctgc
W--> 2262 ttctatcttc 1440 tcttctgtgt ggttctgtg tgatccattc actaccgctc
W--> 2263 tctgtggccc aaatatccaa 1500 acctgtggca tcaactgcta ggaaagtggg
W--> 2264 agttttaga gacagaaaat ataacagtga 1560 tggagcgacc acctgtggag
W--> 2265 ccagagaata tttatgttgg ggttgtgaat tactacgttt 1620 gagaaagtg
E--> 2266 tcaaaattga gaaaacacat ttgtaaatag atgtaataga ctatctaccg 1680
E--> 2267 ttttcatgag gtttaagctct tcttttttgg aaaaaaaaaa aaaaaaaaaa aaa
E--> 2268 1733
2377 <210> SEQ ID NO: 21
2378 <211> LENGTH: 1029
2379 <212> TYPE: DNA
2380 <213> ORGANISM: Triticum aestivum
2382 <400> SEQUENCE: 21
E--> 2383 gcacgagccg ctctcacca acggccagat ggttgatgac atcccgcgg agcagcacgc
2384 60
E--> 2385 gctcgtgccg tctacatga gcggcgccgg cggcgggggc aagaggatcc acccgctccc
2386 120
E--> 2387 tttcgcagat cccaaccttc cagtgaacc gagatccatg gaccggtcca aggatctggc
2388 180
E--> 2389 cgcctacgga tatggcagcg tggcctggaa ggagagaatg gagggctgga agcagaagca
2390 240
E--> 2391 ggagcgctg cagcatgtca ggagcgaggg tggcggtgat tgggatggcg acgatgcaga
2392 300
E--> 2393 tctgccacta atggatgaag ctaggcagcc attgtccaga aaagtcccta tatcatcaag
2394 360
E--> 2395 ccgaattaat ccctacagga tgattatcgt tatccggttg gtggttttgg gtttcttctt
2396 420
E--> 2397 ccactaccga gtgatgcac cggcgaaaga tgcatttgca ttgtggctca tatctgtaat
2398 480
E--> 2399 ctgtgaaatc tggtttgca tgtcctgtat tcttgatcag ttcccaaagt ggtttccaat
2400 540
E--> 2401 cgagagagag acttacctgg accgtttgtc actaaggttt gacaaggaag gtcaaccctc
2402 600

```

*format error*

*same error as p. 1*

## RAW SEQUENCE LISTING

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:51

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

E--> 2403 tcagcttgct ccaatcgact tctttgtcag tacggttgat cccacaaagg aacctccctt  
2404 660

E--> 2405 ggtcacagcg aacactgtcc tttccatcct ttctgtggat tatccggttg agaaggtctc  
2406 720

E--> 2407 ctgctatggt tctgatgatg gtgctgcaat gcttacgttt gaagcattgt ctgaaacatc  
2408 780

E--> 2409 tgaatttgca aagaaatggg ttcctttcag caaaaagttt aatatcgagc ctctgtctcc  
2410 840

E--> 2411 tgagtgggtac ttccaacaga agatagacta cctgaaagac aaggttgctg cttcatttgt  
2412 900

E--> 2413 tagggagagg agggcgatga agagagaata cgaggaattc aaggtaagga tcaatgcctt  
2414 960

E--> 2415 ggttgcaaaa gcccaaaagg ttcctgagga aggatggaca atgcaagatg gaagcccctg  
2416 1020

E--> 2417 gcctggaaa  
2418 1029

*same*

## VERIFICATION SUMMARY

DATE: 11/18/2002

PATENT APPLICATION: US/09/720,383B

TIME: 17:18:53

Input Set : A:\BB-1170 USPCTCorrected Sequence Listing.txt

Output Set: N:\CRF4\11182002\I720383B.raw

L:32 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:1 ✓  
 M:254 Repeated in SeqNo=1  
 L:144 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:3 ✓  
 M:254 Repeated in SeqNo=3  
 L:499 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:5 ✓  
 M:254 Repeated in SeqNo=5  
 L:612 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:7 ✓  
 M:254 Repeated in SeqNo=7  
 L:972 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:9 ✓  
 M:254 Repeated in SeqNo=9  
 L:1321 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:11 ✓  
 M:254 Repeated in SeqNo=11  
 L:1438 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:13 ✓  
 M:254 Repeated in SeqNo=13  
 L:1604 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:14 after pos.:192  
 L:1769 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:15 ✓  
 M:254 Repeated in SeqNo=15  
 L:1971 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:17 ✓  
 M:254 Repeated in SeqNo=17  
 L:2241 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19 after pos.:240 ✓  
 L:2253 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:1020 SEQ:19  
 L:2254 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2255 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2255 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2256 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2256 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2257 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2257 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2258 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2258 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2259 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 M:254 Repeated in SeqNo=19  
 L:2261 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2262 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2262 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2263 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2263 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2264 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2264 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2265 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2265 M:334 W: (2) Invalid Amino Acid in Coding Region, NUMBER OF INVALID KEYS:6  
 L:2266 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:19  
 L:2268 M:252 E: No. of Seq. differs, <211> LENGTH:Input:1733 Found:1233 SEQ:19 ✓  
 L:2296 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:20 after pos.:80  
 L:2383 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:60 SEQ:21 ✓  
 M:254 Repeated in SeqNo=21

# Raw Sequence Listing Error Summary

## ERROR DETECTED

## SUGGESTED CORRECTION

SERIAL NUMBER:

09/920,383B

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1      Wrapped Nucleics  
    Wrapped Aminos      The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2      Invalid Line Length      The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3      Misaligned Amino  
    Numbering      The numbering under each 5<sup>th</sup> amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4      Non-ASCII      The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5      Variable Length      Sequence(s)      contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6      PatentIn 2.0  
    "bug"      A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s)     . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7      Skipped Sequences  
    (OLD RULES)      Sequence(s)      missing. If intentional, please insert the following lines for each skipped sequence:  
    (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
    (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)  
    (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)  
    This sequence is intentionally skipped  
  
    Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8      Skipped Sequences  
    (NEW RULES)      Sequence(s)      missing. If intentional, please insert the following lines for each skipped sequence.  
    <210> sequence id number  
    <400> sequence id number  
    000
- 9      Use of n's or Xaa's  
    (NEW RULES)      Use of n's and/or Xaa's have been detected in the Sequence Listing.  
    Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.  
    In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.
- 10      Invalid <213>  
    Response      Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11      Use of <220>      Sequence(s)      missing the <220> "Feature" and associated numeric identifiers and responses.  
    Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.  
    (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12      PatentIn 2.0  
    "bug"      Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13      Misuse of n      n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.